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Selling Gypsy-Moth-Killed Oak Timber

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Oak trees killed by the gypsy moth may still be valuable. In order to get the highest dollar return, it is essential to harvest them as soon as possible, preferably within one year after death. Dead oaks are subject to fungus and insect attacks that cause deterioration of the wood. So, the longer the delay, the more difficult it becomes to sell the dead timber.

Numerous kinds of wood products can be obtained from recently killed trees. However, each year that the dead tree remains standing, the number of products that can be manufactured declines rapidly. After 3–5 years, the only salvageable wood product may be firewood or pallet stock. Recently killed timber, on the other hand, can provide veneer and, in some instances, high quality lumber, railroad ties, pulpwood, and other marketable products. Buyers seldom offer the same prices for dead material as they do for standing green timber. Because it is difficult to know how long a tree has been dead, appearance class guidelines are presented here for use in determining tree values.

The roundwood products to be derived from gypsy-moth-killed oak trees depend upon tree size, log quality, and soundness of the wood.

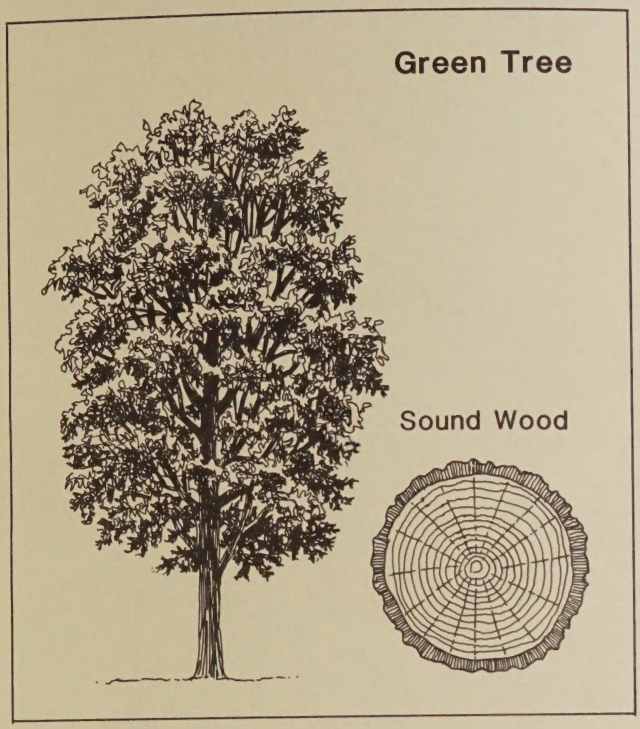
Produce Value vs. Appearance Class

The condition of bark, crown, and wood determines the products for which dead oaks can be used. A knowledge of associated insect activity can also be used to help make this determination (Table 1).

Trees that have been weakened by one or more defoliations are highly susceptible to attack by other organisms. These weakened trees are often invaded by secondary agents such as the shoestring fungus and the two-lined chestnut borer which eventually kills the trees.

Table 1
Tree Appearance

CLASS	BARK	INSECT ACTIVITY	CROWN
1	tight	little to none	some gre… present fine branc…
2	coming off in upper crown	ambrosia or shot hole borers in lower bole	smaller br… to drop
3	coming off in upper crown & main stem	ambrosia & wood borers (flat or serpentine tunnels), some woodpecker activity	lost fine tw… some inter… loss
4	gone from main stem	increase in beetles	only main…
5	no bark	oak timberworm & roundheaded and flatheaded borers present	all branch…



Class 1

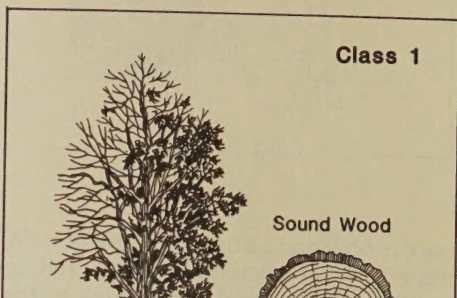
The bark will be tight and still have its natural color (Table 1). Some sapstain will begin to show in the outermost wood as light to dark brown. Little or no insect activity will be present in the wood. The crown will normally have sparse patches of green leaves interspersed among the dead wilted foliage. The wood may show a few signs of minor decay but, for the most part, decay is absent. At this stage, the wood is suitable for veneer, sawlogs, and pulpwood (Table 2).

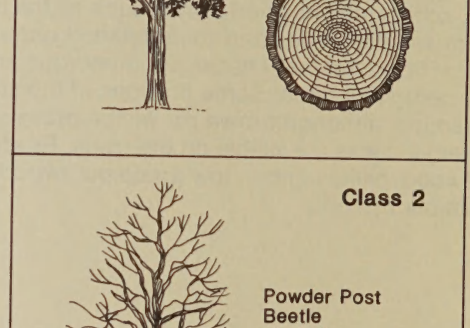
Table 1
Tree Appearance

	CROWN CONDITION	WOOD CONDITION
	some green & dead leaves present fine branches present	OK or some sapwood discoloration
ole e	smaller branches begin to drop	sapwood discoloration decay in sapwood
borers tunnels), activity	lost fine twigs & branches some intermediate branch loss	some advanced decay weather checks
s	only main branches left	advanced decay weather checks
k present	all branches gone	weather checks numerous advanced decay

Table 2
Tree Appearance

CLASS	VENEER LOGS	FACTORY GRADE SAWLOGS	PULPW
1	X	X	X
2		X	X
3			X
4			
5			





Class 2

The bark will still have a tight appearance on the main trunk. Patches of bark will begin to slough off in the upper crown. Stain is now evident throughout the outer sapwood. Ambrosia beetle sawdust may be seen near the base of the tree (small holes in the bark which have the appearance of a shotgun blast). Some of the finer twigs and branches will begin to drop. Trees at this stage can still be utilized for sawtimber and pulpwood. There is a minimum loss in wood volume and dollar value, since the rot and wood boring activity is still localized in the outermost part of the tree. Decay is least in the butt, the most valuable part, and greatest in the upper bole, least valuable part of the tree (Figure 1).

ble 2
pearance

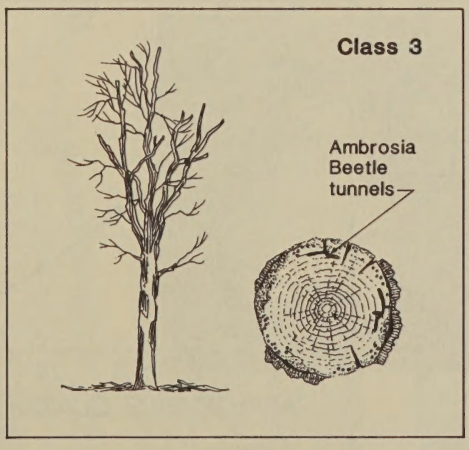
PULPWOOD	LOCAL USE LOGS	FIREWOOD
X X X	X X X X	X X X X X

Class 3

At this stage, trees will begin to lose not only fine twigs and branches but also intermediate branches. Patches of bark will now be missing in both the upper crown and lower bole. Wood borer damage will be prominent. In addition to shotholes, serpentine tunnels of wood borer activity will be evident. Woodpecker activity may also be prominent. Weather checks will be evident where the bark is missing. Advanced decay will be visible.

Because decay generally progresses from the crown downward, the lower stem is often salvageable for factory grade sawlogs. Upper stem logs will show the largest volume loss due to decay and insect activity (Table 2).

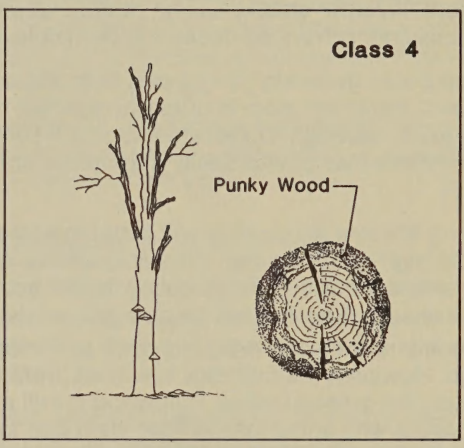
Salvaging the tree at this time will result in some decrease in high grade lumber. Losses in lumber quality and volume are attributable to decay, insect activity, and weather checks. The tree becomes a greater risk for high quality roundwood products such as factory grade sawlogs. However, the butt logs are most preferred and will return the greatest value. Pulpwood is still a marketable product with some loss in fiber yield due to sapwood decay. In this stage of decay, much of the trees' sawlogs can be manufactured into pallet lumber and blocking products. Fuel-wood is another alternative product but the least desirable, since it generally has less value than sawtimber.



Class 4

Here most of the bark is missing from the main stem but patches of bark are visible; mushrooms or conks have grown on the bark and more beetles have invaded the main stem. The bark will show numerous insect entrance and exit holes and there will be fine powdery accumulations, as evidenced by wood boring activity. Only the main branches will remain in the crown. Advanced decay and weather checks will be obvious.

The tree now has only borderline economic value for lumber and pulpwood. Volume losses are now significant and may average up to 35 percent while quality loss of high grade lumber is very high. Only the butt log may be salvageable for factory grade lumber. Most of the sawlogs will be low grade and usable as pallet lumber, cants, or pulpwood when decay is not extreme. Where rot is extreme, use only for firewood.



Dollar returns from Salvage Timber relative to Appearance Classes.

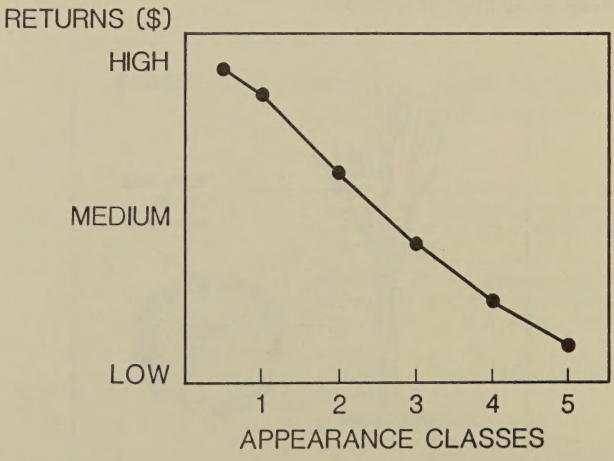
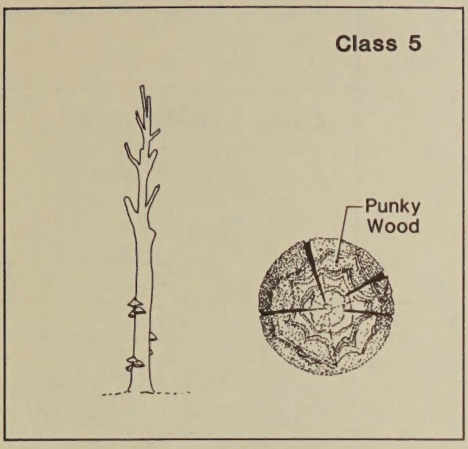


Figure 1.



Class 5

All the bark is now gone from the main stem. All or most of the branches have fallen off. In addition to ambrosia beetles, other kinds of wood borers such as the oak timberworm and flatheaded and roundheaded borer tunnels are visible. Weather checks are numerous and advanced decay has set in. Some portions of the stem may still be sound, although brown rot will be prevalent. More fungal conks are visible on the trunk. Product uses are firewood, pallet lumber, low grade pulpwood, and local lumber use only.

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